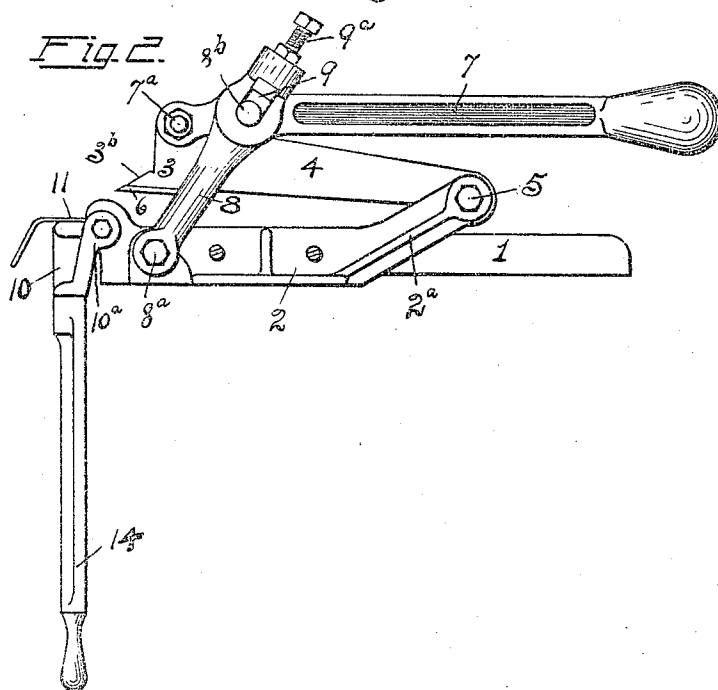
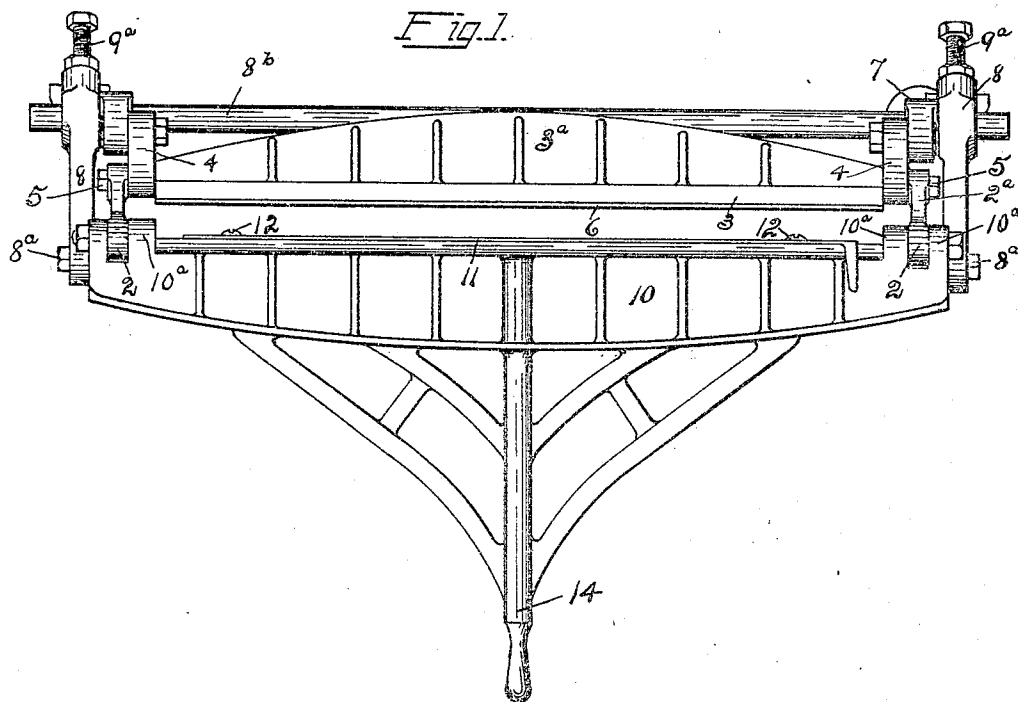


No. 792,136.

PATENTED JUNE 13, 1905.

W. M. JOHNSON.
CORNICE BRAKE MACHINE.
APPLICATION FILED MAR. 27, 1905.

2 SHEETS—SHEET 1.



WITNESSES:
C. A. Young.
D. C. Walter

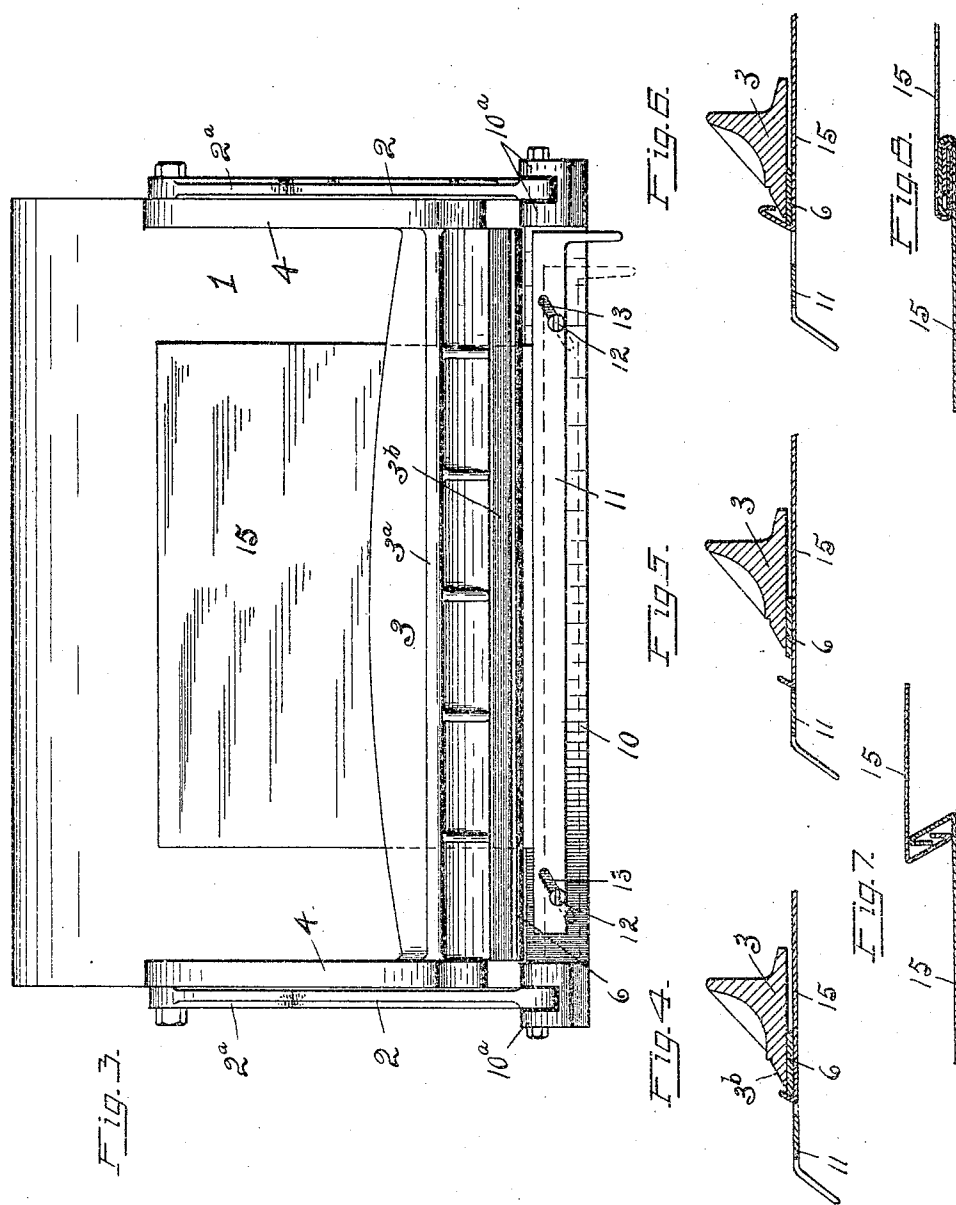
INVENTOR:
Wm. M. Johnson,
By Owen & Owen,
His attorneys.

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UNITED STATES PATENT OFFICE.

WILLIAM M. JOHNSON, OF TOLEDO, OHIO.

CORNICE-BRAKE MACHINE.

SPECIFICATION forming part of Letters Patent No. 792,136, dated June 13, 1905.

Application filed March 27, 1905. Serial No. 252,227.

To all whom it may concern:

Be it known that I, WILLIAM M. JOHNSON, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Cornice-Brake Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to the class of sheet-metal-bending machines known as "cornice-brakes," and has for its object the provision of an improved machine of this class that is cheap and durable in its construction and simple and efficient in its operation.

The invention is fully described in the following specification and shown in the accompanying drawings, in which—

Figure 1 is a front elevation of my invention with the movable clamp shown in inoperative or raised position. Fig. 2 is an end elevation of Fig. 1. Fig. 3 is a plan view of Fig. 1 with the operating-lever and connecting-link removed and showing a metal sheet disposed between the clamping-faces. Figs. 4, 5, and 6 are detail cross-sectional views of the movable clamp and gage-bar, showing different stages in the bending of the edge of a sheet-metal strip. Figs. 7 shows the bent edges of two metal sheets loosely interlocked, and Fig. 8 shows the same flattened and rigidly locked together.

Referring to the drawings, 1 represents the bed-plate, which may be placed upon a table, bench, or other suitable support and forms the fixed jaw of my invention. Secured to each end of the bed-plate 1 is a bracket 2, which has its forward end terminating slightly in advance of the front or clamping edge of said plate and its rear end formed with a rearwardly-inclined arm 2^a, which terminates above the surface plane of the plate a suitable distance to the rear of its clamping edge, as shown in Fig. 2.

The movable jaw or clamping member is in-

icated at 3 and is provided at each of its ends with a rearwardly-extending arm 4, which is pivoted at 5 to the upper end of the inclined arm 2^a, as shown in Fig. 2. The jaw 3 is formed on its upper surface with a longitudinal web 3^a and has its upper forward surface beveled, as shown at 3^b, to form a sharp angle with the under surface thereof. Secured longitudinally to the under surface of the nose of the jaw 3 is a removable shoe or plate 6, which has its forward projecting edge beveled to conform to the angle at which it is desired to bend the edges of the metal sheets.

The proper clamping movement is imparted to the jaw 3 through the medium of the operating-lever 7 and links 8, one end of which links is pivoted at 8^a to the brackets 2 at each end of the bed-plate 1 and are connected together at their upper ends by the shaft 8^b. The lever 7 has its forward end pivoted at 7^a to the forward extremity of one of the arms 4 on the jaw 3 and is fulcrumed to the shaft 8^b a distance back from the point 7^a substantially equal to the opening movement of said jaw, whereby the movable jaw is caused to reach its limit of lowering movement and tightly clamp a sheet of metal interposed between it and the bed-plate 1 when the links 8 have been moved by a raising of the lever 7, so that the shaft 8^b and pivots 7^a and 8^a are in alining position. When the parts are in this position, the clamping stress is borne directly by the links, and thus taken from the lever-handle. To adjust the movable jaw 3 to accommodate different thicknesses of metal, the ends of the shaft 8^b are mounted in adjustable bearing-boxes 9, which are controlled by an adjusting-screw 9^a.

The bending apron or brake of my machine is shown at 10 and is formed at either end thereof with bearing-lugs 10^a, which are pivoted to the forward end of the brackets 2. The apron 10 is normally suspended in vertical position and has its upper horizontal edge or bending-surface flattened and disposed in a plane with the surface of the bed-plate 1 to enable the edge of a metal sheet to project over the same a distance equal to the flange it is wished to form on such sheet. A gage-strip 11 is secured to the upper edge of the

apron and is made adjustable by reason of the retaining-screws 12 passing through diagonally-disposed slots 13 in said strip. The arranging of the slots 13 in this manner permits of accurate adjustment of each end of the strip by simply loosening the screws 12 and longitudinally moving the strip 11 a distance necessary to adapt it to take the required amount of stock. An operating-handle 14 projects downwardly from the lower side of the apron.

When a metal sheet 15 has been placed on the bed-plate 1, with its forward edge against the contiguous edge of the gage-strip 11 and clamped against movement by a lowering of the movable jaw 3, the apron 10 is raised and the projecting edge of the sheet caused to be bent at the desired angle over the beveled edge of the plate 6 or nose of the upper clamp 3 should said plate be left off. In Figs. 4, 5, and 6 are shown different stages in the formation of the interlocking flanges shown on the contiguous edges of the sheets in Fig. 7. In Fig. 4 the first flange has been formed, in Fig. 5 the gage 11 is shown as being adjusted to take a greater amount of stock and the metal sheet clamped to receive the second bend, and Fig. 6 shows the sheet formed with the two bends.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a metal-bending machine, the combination with the fixed lower jaw, and the bending-apron, of the movable jaw, a link pivoted to each end of the fixed jaw, means connecting said links, and a lever fulcrumed to said means and having one end pivoted to the forward portion of the movable jaw.

2. In a metal-bending machine, the combination with a bed-plate and a bending-apron,

of a pivoted upper jaw, a link pivoted to each end of the bed-plate adjacent to its forward edge, a member rigidly connecting the upper ends of said links, and a lever pivoted to the forward portion of the movable jaw and fulcrumed to said connecting member at a distance from said pivot substantially equal to the degree of clamping movement of the movable jaw.

3. In a metal-bending machine, the combination with a bed-plate and a bending member, of a pivoted jaw, a link pivoted to each end of the bed-plate adjacent to its forward edge, a member connecting and having its ends adjustably secured to the upper ends of said links, and a lever fulcrumed to said member and having its short arm pivoted to the upper forward portion of said jaw.

4. The combination in a metal-bending machine, of a bed-plate, brackets secured to the ends of the bed-plate and having their rear extremities elevated above the surface plane of the plate, a movable clamping-jaw having rearwardly-extending arms pivoted to the elevated portions of said brackets, a link pivoted at its lower end to the forward portion of each bracket, a shaft connecting the upper ends of said links, a lever fulcrumed to said shaft and pivoted at one end to said jaw, and a bending-apron pivotally mounted to the forward portions of said brackets and having its upper edge on a plane with the surface of the bed-plate.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM M. JOHNSON.

Witnesses:

C. W. OWEN,
LOWELL SCHREIBER.